ENERGY SOLUTIONS
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Glass Global / Off-Resume Touch Control
dg02

User Manual
Installation Manual

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1.0 Introduction

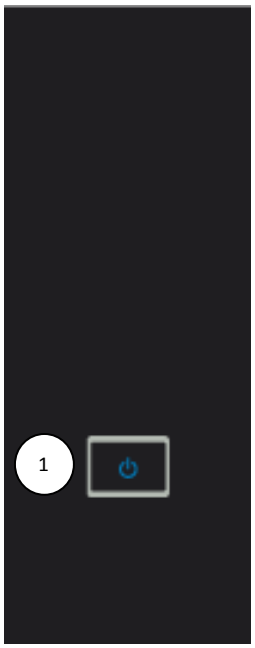
1.1 - Introduction to LightNET

ES LightNET is a simple but powerful lighting control system with dimmer, mood and colour capability. Unique lighting effects can be created in individual areas as well as allowing remote control of sections or of the entire system.

1.2 - Glass Global / Off-Resume Touch Control (dg02)

The glass style global / off-resume touch control provides a sleek and stylish way to switch areas or an entire system on or off using the LightNET lighting system. A standby touch sensor is provided for simplicity and ease of lighting control. The touch sensor is illuminated with a blue symbol to add a unique look to the control and also to help locate the switch in the dark.

2.0 - Using your global / off resume touch control



2.1 - Overview

There is one touch area on the global / off-resume control:

1. Standby

2.2 - Switching Lights On

- After power has been applied to the associated dimmer base units lighting will remain off (standby mode).
- To switch lighting on you press the standby touch area.
- When the standby touch area is pressed the lighting will ramp up to 75% brightness.
- Pressing the standby touch area for more than two seconds when in standby mode will switch lighting on to 75% brightness and any associated colour lighting will turn on to full brightness, white.

2.3 - Switching Lights Off

- When lighting is on, pressing the standby touch area switches the lighting off and the control will go into standby mode.
- The power button will go to a low level of brightness.
- At this point the control is in standby mode and consumes a very small amount of power.
- Consecutive presses of the standby touch area from standby will cause the lighting to resume to the previous level. This means that if any lighting circuits had been turned off by another control prior to the global control being operated, they will not switch back on until the respective control is operated again.

2.4 – Operation of other controls in the system

- If all base units associated with the global control are all switched off the control will go into standby mode.
- If any one of the associated base units are switched on by another control, for example a dimmer touch control, the global control will wake up from standby which is indicated by the illuminated standby LED.

2.5 - Other Features

- **Tracking behaviour** - Where there is more than one control associated with the same set of lights all controls will provide the same visual feedback via their LEDs.
- **Control not configured** - The power LED flashes rapidly if the control has not been programmed to control any base unit devices (i.e. it is not addressed). In order for the control to be operable it must be configured using the esNET Programmer and an esNET USB dongle (ep02). See the Configuration section of this manual for more details.
- **No communication** - If the touch control is configured correctly and powered up but the base unit it is paired with is not powered or the data bus cable is not connected, the control will stay in standby mode no matter what touch area is pressed. Pressing the power touch area will illuminate the LED briefly before going out again.

3.0 – Wiring Details

3.1 – Requirements

In order to assemble a basic functional LightNET system you will need the following at a minimum:

- Touch Control
- Base unit
- RJ12 communications cable (6P6C)
- 12 or 24V power supply e.g. battery.

Please refer to Appendix C for part numbers and the system overview brochure for example system configurations.

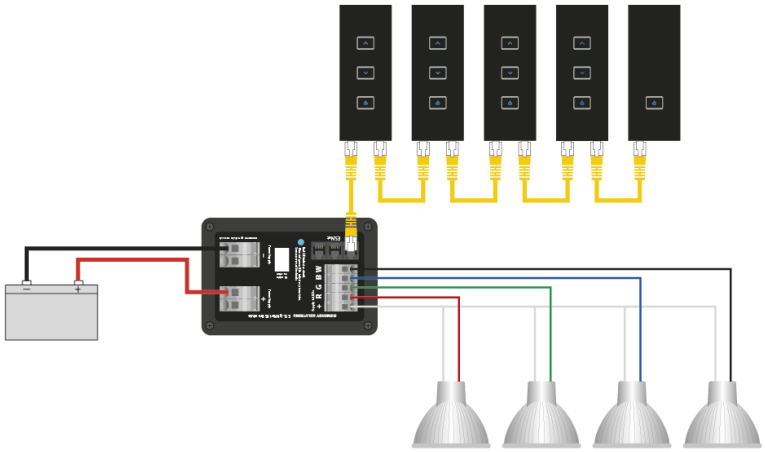
3.2 –I/O Connectors

There are two RJ12 (6 pole 6 contacts or 6p6c) sockets on the reverse side of the Global / Off-Resume touch control. Both are paralleled together and serve the same function enabling LightNET devices to be daisy-chained.

The RJ12 cables are used for carrying data, enabling controls and base units to communicate. They also carry a small amount of power to supply the touch controls.

3.3 – System wiring

As LightNET is a bus system, devices may be configured and wired in virtually limitless ways and the example below shows a common configuration.



The diagram shows a **4-channel LED/Halogen/RGB Driver (db21)** base unit being controlled with four dimmer touch controls and a global on/off touch control.

- Base units usually have three parallel RJ12 connectors. Controls may be connected to any one of these connectors to help simplify wiring and avoid having to install RJ12 splitters into the system.
- RJ12 cabling should always be of the CAT3 twisted pair type.

4.0 – Installation

The touch switches may be mounted into either hollow or solid walls. A unique spring clip design has been developed to enable easy deployment into both types of installation providing invisible fixing. A diagram showing the dimensions of the control is shown in Appendix A.

4.1 – Hollow Walls

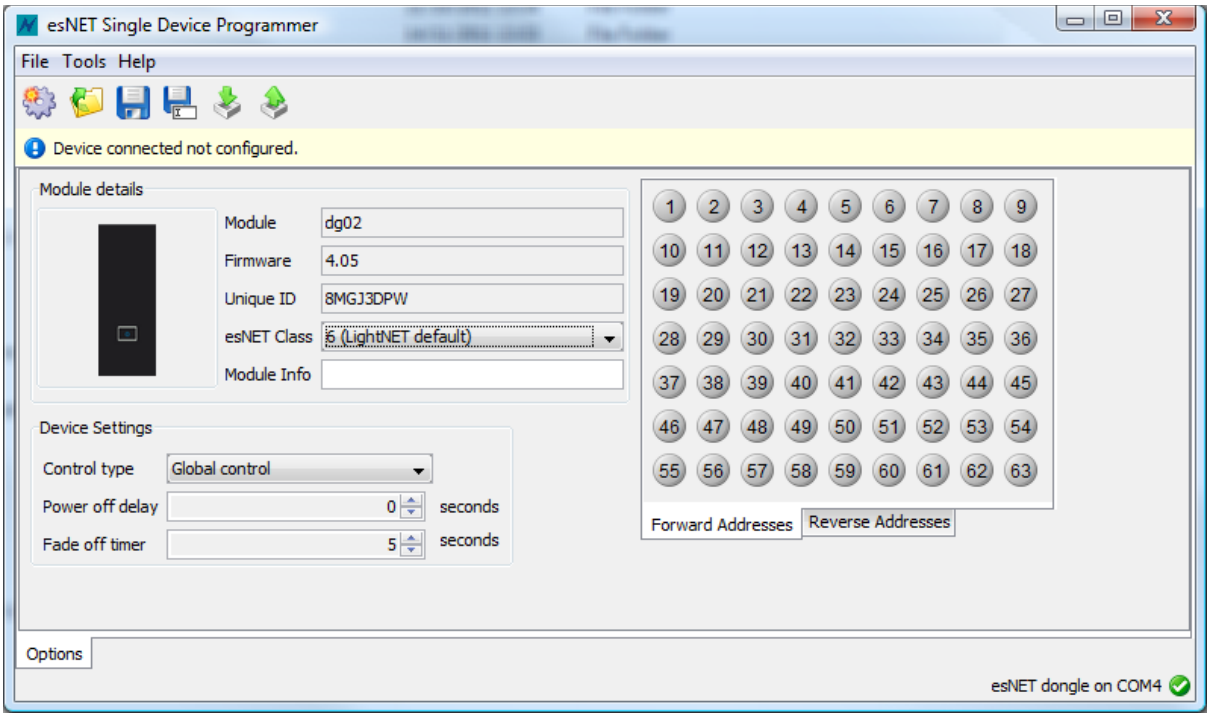
For a hollow wall a cut-out of 34mm wide by 100mm tall must be carefully cut. The switch is then simply connected to the network cabling and inserted into the cut-out. The spring clips hold the switch securely in place.

4.2 – Solid Walls

For solid wall installations a standard 135 x 75 x 35 metal back box should be sunk vertically into the wall. An aluminium adaptor plate should be screwed into the back box and plastered over leaving the exposed 34mm wide by 100mm tall cut-out for the touch switch to be clipped into. Please see Appendix C for ordering codes.

5.0 – Configuration and Addressing

The global / off-resume touch control is configured using the esNET Programmer Software and an esNET USB dongle (ep02). When a new control is connected with no configuration stored within it the following screen will be displayed:



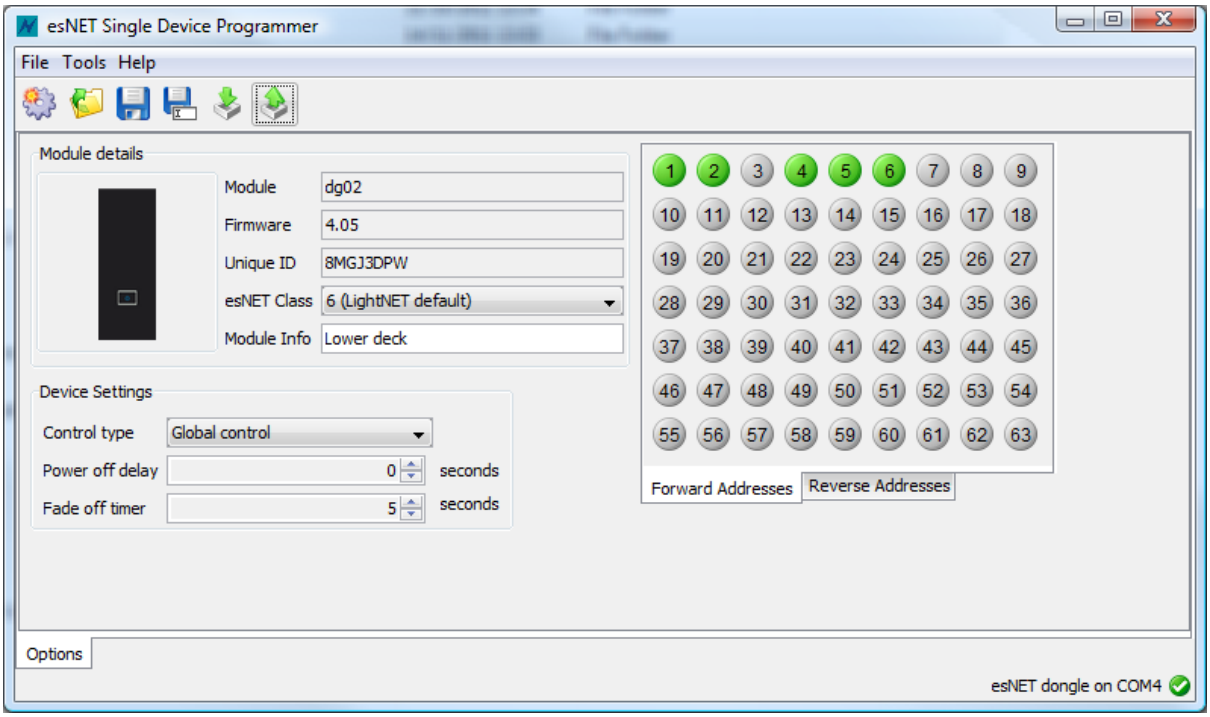
The following table describes the items displayed that are for information only:

Parameter	Example	Description
Module	dg02	The product ID code read from the device. This describes the hardware type: 'dg' and hardware version: '02'.
Firmware	V4.05	The firmware version running on the device.
Unique ID	8MGJ3DPW	An automatically generated random unique device identifier used internally by esNET
esNET Class	6 (LightNET default)	The esNET class for LightNET devices should always be set to 6

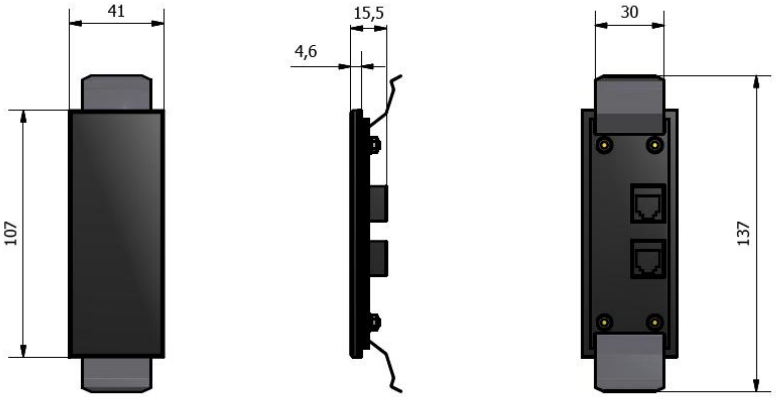
The following table describes items displayed on the screen that must be configured:

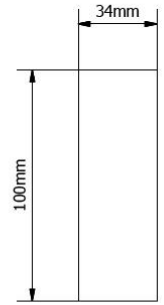
Parameter	Example	Description
Module Info	Lower deck	Provides a 16 character text area where user specified detail about the device can be entered. This is stored within the device and may be read back later. For example, “Lower deck”.
Forward Addresses	1, 2, 4, 5, 6	Up to 24 forward addresses may be selected for a global touch control. They refer to the addresses of the base units they will be controlling. For example if lower deck lighting is connected to base units with addresses 1, 2, 4, 5 and 6 you should select these addresses in the forward address tab.
Control Type	Global Control / One-button power	Selects between whether the control should act as a one button off/resume control or a global control. **One button power** control may only control up to four base units in the same way that a dimmer control would, i.e. it will turn base units on or off when the standby touch area is pressed. **Global control** can control up to 24 base units. When selected two additional options are made available detailed below.
Power off delay	0 seconds	May be configured from 0 to 255 seconds. It determines the length of time after the standby touch area has been pressed that the lights will begin to fade off. During this period the standby LED will flash once per second.
Fade off timer	5 seconds	May be configured from 5 to 500 seconds. It determines the length of time taken between lights starting to turn off and lights completely extinguishing.

Once the **Module Info** has been entered (if required), **Forward Addresses** have been selected and any other fields have been changed from their defaults if required, configuration is complete. Select **Program Module** from the **Tools** menu. This will write the configuration to the touch control. An example configuration is shown:

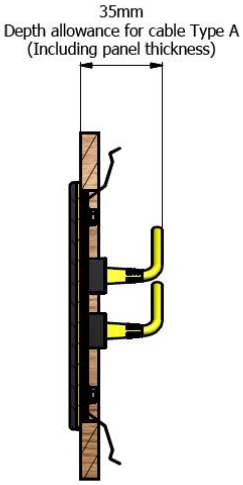

esNET Single Device Programmer
File Tools Help
Module details
Module dg02
Firmware 4.05
Unique ID 8MGJ3DPW
esNET Class 6 (LightNET default)
Module Info Lower deck
Device Settings
Control type Global control
Power off delay 0 seconds
Fade off timer 5 seconds
1 2 3 4 5 6 7 8 9
10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45
46 47 48 49 50 51 52 53 54
55 56 57 58 59 60 61 62 63
Forward Addresses
Reverse Addresses
Options
esNET dongle on COM4

Appendix A – Mechanical Drawing

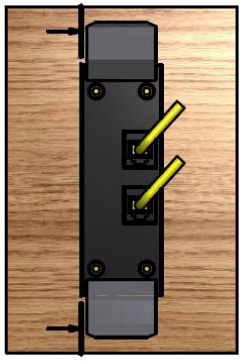


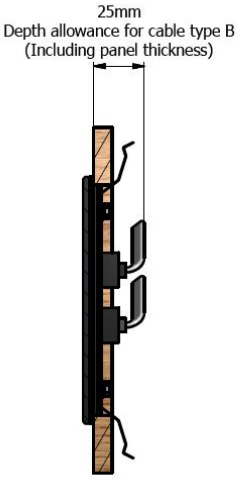


Cut Out Detail
Mounting panel thickness 8 - 22mm

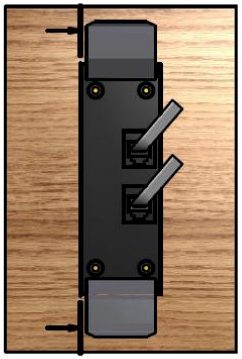


Cable Type A





Cable Type B



Appendix B - Technical Data

Parameter	Value	Notes
Nominal Supply Voltage	7.5 - 32V	
Max. Standby Current	600µA	at nominal 24V supply
Operating Current	8mA	at nominal 24V supply
Control Type	LightNET	
Operating Temperature Range	-40 - +85°C	
IP Rating	IP4X	

Appendix C – Ordering Codes

Modules:

Ordering Code	Description
ES.NET-GL-UP/DOWN/OFF	Glass dimmer touch control (du02)
ES.NET-GL-OFF/RESUME	Glass global off/resume control (dg02)
ES.NET-GL-RGB	Glass RGB control (du12)
ES.NET-GL-MOOD	Glass preset / mood touch control (dm02)
ES.NET-RGB-DRIVER-V5	25A 4-channel / RGB base unit (db21)
ES.NET-DIMMER-10A	10A Halogen lamp dimmer / voltage stabiliser (db01)

Accessories:

Ordering Code	Description
ES.NET-DRIVER-ESLED-350	350mA constant current driver for LED lamps, 12/24V nominal supply, fully dimmable with PWM driver.
ES.NET-DRIVER-ESLED-700	700mA constant current driver for LED lamps, 12/24V nominal supply, fully dimmable with PWM driver.
ES.NET-GL-MOUNT-3	Mounting plate to enable 3-way glass style touch switches to be mounted in an industry standard 135 x 75 x 35 metal back box.
ES.NET-GL-MOUNT-6	Mounting plate to enable 6-way glass style touch switches to be mounted in an industry standard 135 x 75 x 35 metal back box.

Cables and Connectors:
All cables are high quality CAT3 cable with 6P6C RJ12 connectors, i.e. all six pins of the connectors are loaded and connected. Connectors are fully over moulded with strain relief to ensure cables survive being installed in harsh environments.

Ordering Code	Description	Cable Type
C-UTP-RJ12-200-FLAT	0.2m RJ12 flat patch cable, grey, not moulded.	B
C-UTP-ES-RJ12/0.3M-YELL	0.3m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/0.5M-YELL	0.5m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/01M-YELL	1m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/02M-YELL	2m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/03M-YELL	3m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/05M-YELL	5m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/10M-YELL	10m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/15M-YELL	15m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/20M-YELL	20m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/26M-YELL	26m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/30M-YELL	30m RJ12 moulded patch cable, yellow	A
C-UTP-ES-RJ12/35M-YELL	35m RJ12 moulded patch cable, yellow	A
ADAPTOR-RJ12-T-6 WAY	Two way RJ12 splitter, 1 male to 2 female.	N/A
PATCH LEAD/COUPLER RJ12	Coupler for joining two RJ12 patch leads.	N/A

A range of **white / RGB LED strips**, lamps and other accessories are available to the parts listed above. Please contact sales@energy-solutions.co.uk or call +44 (0) 1634 290772 for more details.

Notes:

Notes:

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